

AMENDMENTS TO THE SPECIFICATION:

Please delete the first full paragraph on page 15 (that is, page 15, lines 3-17) of Applicants' specification and replace therefor the following new paragraph:

--The detailed composition of the silicon remover 2 is indicated in FIG. 4. The silicon remover 2 comprises a spray 26 and a diffusion portion ~~9727~~ filled with packing materials inside the vessel. The exhaust gas containing CF_4 , SiF_4 , and the like as impurities is conducted into the vessel of the silicon remover 2 via the piping 29. The exhaust gas outlet of the piping 29 in the vessel is oriented downwards. The exhaust gas flows upwards in the vessel, and passes through the diffusion portion ~~9727~~ to diffuse and to flow in the vessel. Cooling water supplied from a water supplying pipe 38 is sprayed through the spray 26. The diffusion portion ~~9727~~ increases the contacting ratio of the sprayed water and the exhaust gas, and improves the performance for removal of the impurities as explained later.--

Please delete the paragraph bridging pages 16 and 17 (that is, page 16, line 24 to page 17, line 25) of Applicants' specification and replace therefor the following new paragraph:

--Detailed composition of the PFC decomposition processing unit 76 is indicated in FIG. 5. The PFC decomposition processing unit 76 comprises a heating apparatus 3, a reactor 9, and a cooling apparatus 22. A casing 6 and an internal tube 7 are shared between the heating apparatus 3 and the reactor 9. The diameter of the internal tube 7 is smaller at the upper portion than at the lower portion thereof. A lid 87 to be connected to the piping 31 is provided on the upper end of the casing 6. A flange 12 of the internal pipe 7 is fixed to the flange 13 of the casing 6 by bolts. The heating apparatus 3 and the reactor 9 are composed to form an integral body

structure. The upper end portion of the internal tube 7 is restricted in moving in a horizontal direction by a cylindrical portion 14 provided on the lid 87. A ring shaped plate 8 is provided on the internal tube 7. The heating apparatus 3 comprises a electric heater 4 and a thermal insulating material 5 covering the heater is arranged above the ring shaped plate 8. The heater 4 and the insulating material 5 are arranged between the casing 6 and the internal tube 7. A gap 9946 is formed between the casing 6 and the ring shaped plate 8. The gap 9946 prevents the casing 6 from conducting the heat of the high temperature exhausted gas (700°C) from the internal tube 7 and the ring shaped plate 8 and releasing the heat outside the casing 6. That means that a heat loss of the exhaust gas can be reduced. The structure of the PFC processing apparatus 1 can be simplified by forming an integral body structure with the heating apparatus 3 and the reactor 9.--

Please delete the paragraph bridging pages 18 and 19 (that is, page 18, line 16 to page 19, line 11) of Applicants' specification and replace therefor the following new paragraph.

--Reaction water, or steam, supplied from the water supplying pipe 32, and air supplied from the air supplying pipe 41 are mixed with the exhaust gas in the piping 31. The water is supplied into the exhaust gas, because the chemical reaction expressed by the equation (2) explained later is a hydrolysis reaction. The amount of water, or steam, supplied is approximately 25 times per one mole of CF_4 . The exhaust gas containing water, air, and CF_4 is heated indirectly by the electric heater 4 while flowing through a path 15 in the heating apparatus 3. Then, the water is converted to steam. The exhaust gas is heated by the electric heater 4 to

approximately 700°C, i.e. a temperature for the decomposition of CF_4 and preferably proceeds in the catalyst layer. The temperature control apparatus ~~6230~~ controls the current flowing in the electric heater 4 so that the temperature T_e of the exhaust gas determined by the thermometer 61 at the inlet portion 94 of the reactor 9 becomes a preset temperature. This temperature control is used in each of the following embodiments. The temperature of the catalyst layer 11 can be maintained at the reaction temperature by the above temperature control. In the case of CF_4 , the temperature is maintained in the range of approximately 650 - 750°C.--